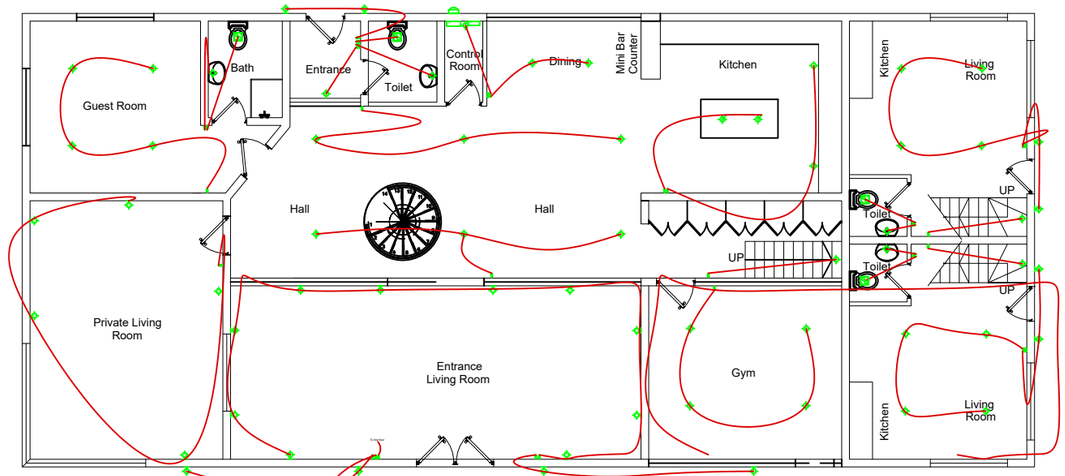
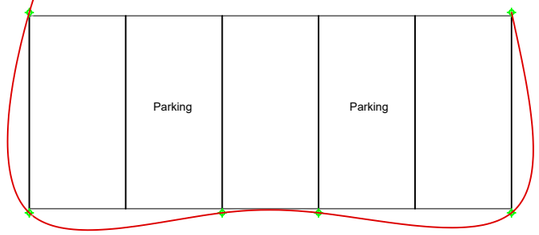
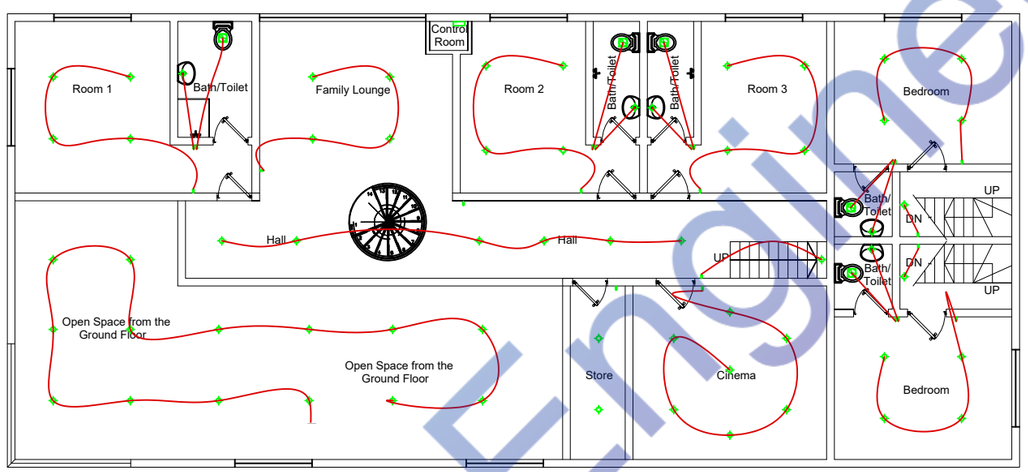
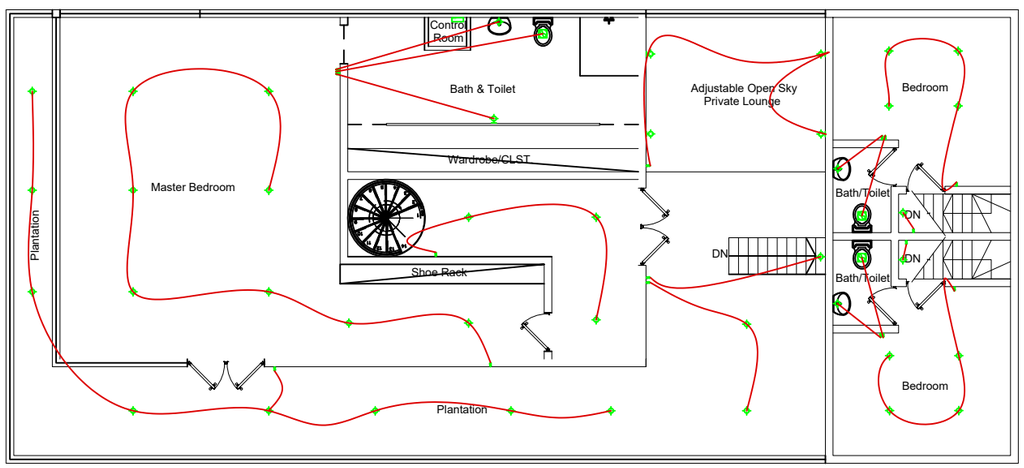


Ground Floor





First Floor



Second Floor

Note:
This Electrical layout plan has been carefully developed in accordance with all current and updated codes and regulations applicable in the Netherlands. The design incorporates a smart, Alexa-controlled electrical system, ensuring both modern functionality and compliance with established standards. The following codes and standards have been strictly adhered to:

- NEN 1010:2015 - The Dutch standard for the design, construction, and inspection of electrical installations, ensuring safety and reliability.
- NEN 3140:2011 - Governs the safe operation, maintenance, and inspection of low-voltage electrical installations.
- NEN-EN-IEC 60364 - Covers electrical installations for buildings, providing guidelines for electrical safety and energy efficiency.
- NEN 5139:2021 - Specific to smart home technology, including the integration of smart control systems like Alexa.
- EU Low Voltage Directive (2014/35/EU) - Ensures that electrical installations meet the essential safety requirements across the European Union.
- EU Electromagnetic Compatibility Directive (2014/30/EU) - Ensures the electrical system does not interfere with or be affected by other electronic devices.

The design has been completed in full compliance with the above standards, integrating the latest smart home technologies while ensuring the safety, efficiency, and reliability of the electrical system.

ELECTRICAL LEGEND

- 20W CEILING MOUNT LED LIGHT
- 20W HANGING LED LIGHT
- SMOKE DETECTOR
- 40W LED TUBE LIGHT 4 FEET
- 40W LED LIGHT 4'X4'
- SMART ALEXA ONE WAY SWITCH 220V
- SMART ALEXA MULTI SOCKET OUTLET 220V
- 10W WALL MOUNTED LED LIGHT
- 60W CEILING FAN 220V
- SUB DISTRIBUTION BOARD
- MAIN DISTRIBUTION BOARD
- 40W BATHROOM EXHAUST FAN
- METER
- PARKING LIGHT

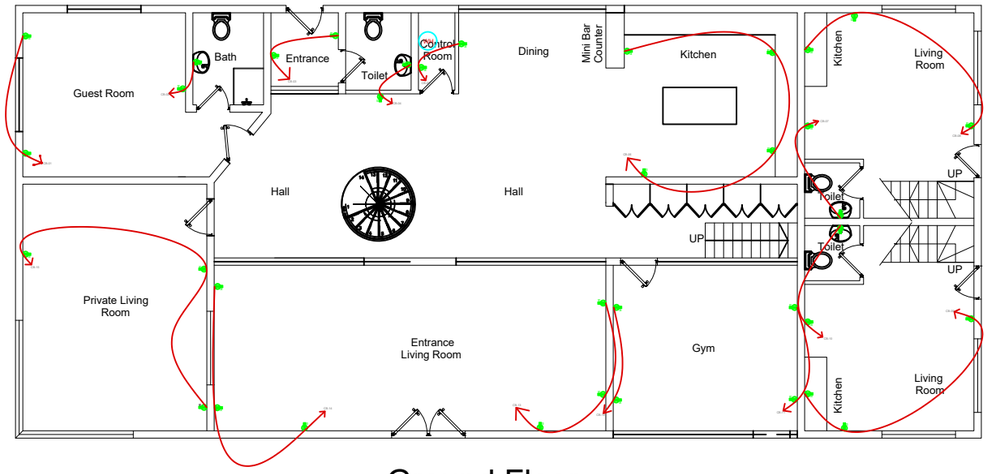
PROJECT :
Renovation
Houtlaan 2, 2243 CB Wassenaar, Netherlands

TITLE:
Electrical Lighting Plan

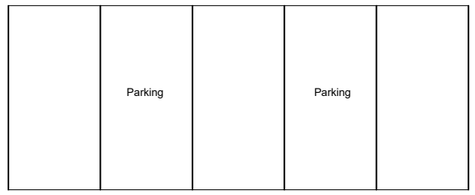
DRG NO: E1

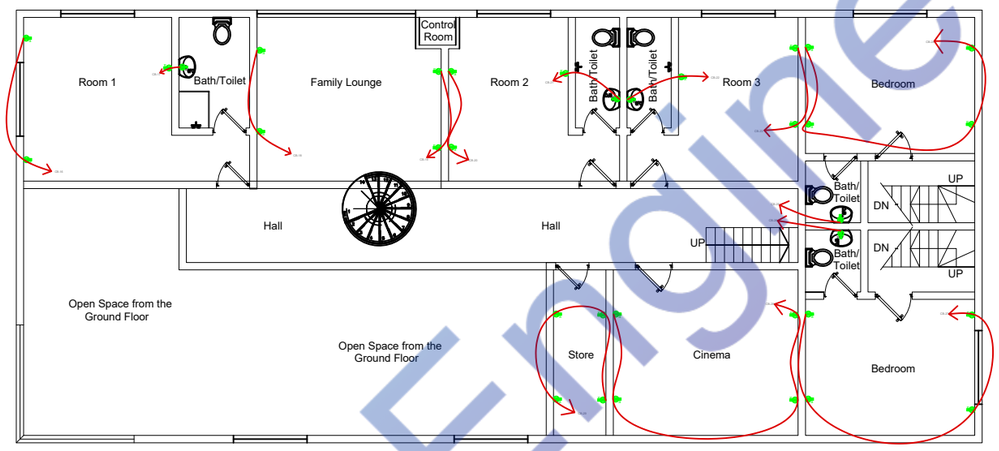
SCALE: 1 8" = 1' 0" @ A1		DESIGNED BY:	MD Al Amin
REF.NO:		DRAWN BY:	.....
REVISION NO:		CHECKED BY:	.....
PAGE: 01		ENGINEER	
DATE: 25/08/2024			

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED

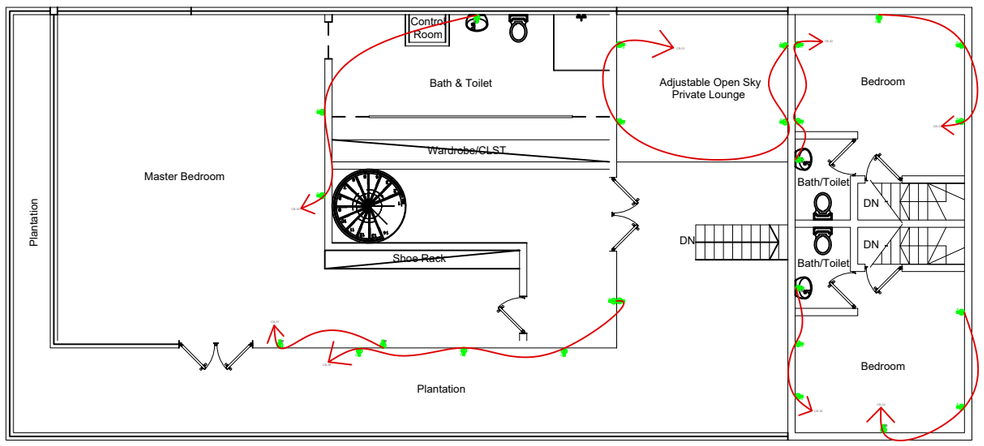


Ground Floor





First Floor



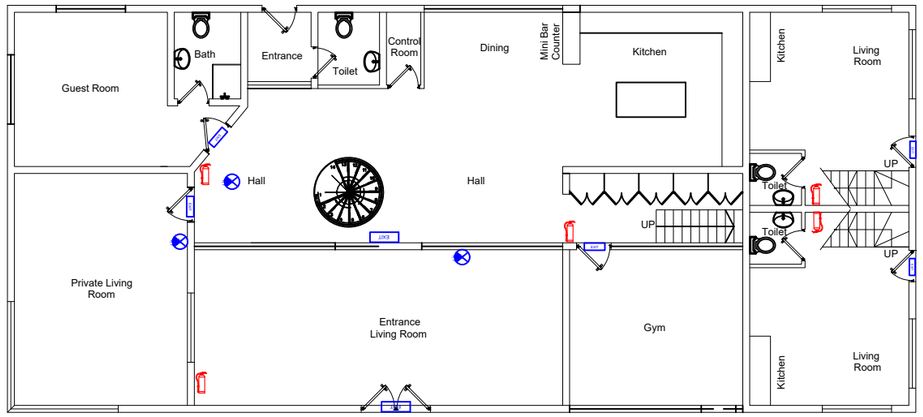
Second Floor

ELECTRICAL LEGEND

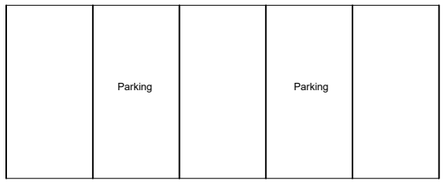
	MULTI SOCKET OUTLET 120V
GFCI	GFCI MULTI SOCKET OUTLET 120V
WH	INSTANT WATER HEATER

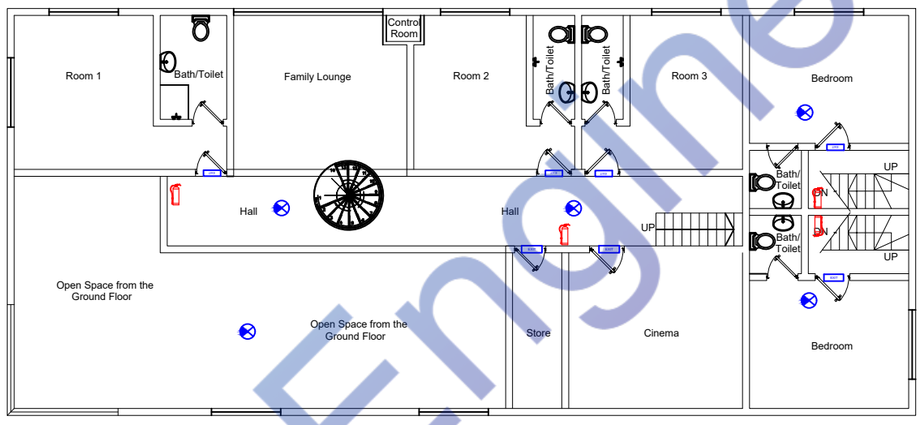
PROJECT : Renovation, Houtlaan 2, 2243 CB Wassenaar, Netherlands	TITLE: Electrical Power Plan	SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY:	MD Al Amin
		REF.NO:	DRAWN BY:	.....
		REVISION NO:	CHECKED BY:	.....
	DRG NO: E2	PAGE: 02 DATE: 25/08/2024	ENGINEER	

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED

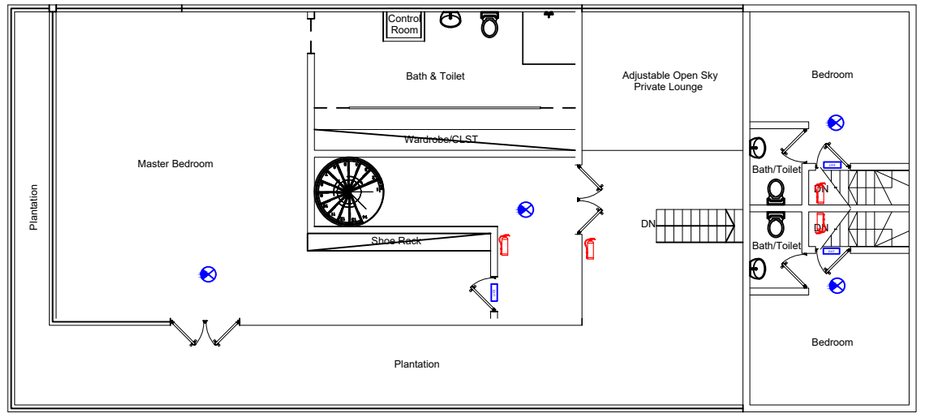


Ground Floor





First Floor



Second Floor

Note:
This Fire Safety layout plan has been developed in full compliance with the latest codes, regulations, and standards in force within the Netherlands. The following codes and standards have been rigorously followed:

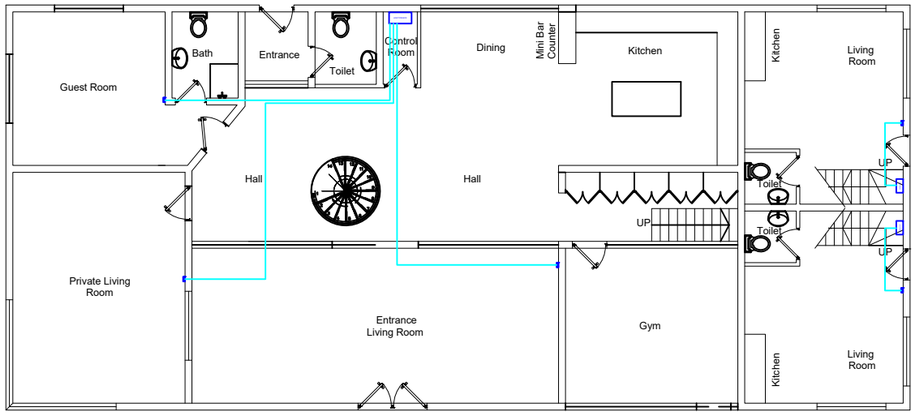
- Bouwbesluit 2012 (Building Decree 2012) - Establishes the general building regulations, including fire safety requirements for both new and existing buildings.
- NEN 6068:2011 - Specifies fire resistance and compartmentalization requirements to prevent the spread of fire.
- NEN 6098:2016 - Governs the design, installation, and maintenance of fire alarm and detection systems.
- NEN 2535:2017 - Provides standards for the installation of fire alarm systems in buildings.
- NEN-EN 13501-1:2019 - Outlines the classification of construction products and building elements based on their fire resistance.
- NEN-EN 12845:2020 - Pertains to the design and installation of fixed firefighting systems, particularly automatic sprinkler systems.
- Brandveilig Gebruik Bouwwerken (Fire-safe Use of Buildings) - Provides specific guidelines for the safe use and management of buildings concerning fire safety.

This plan ensures that all fire safety measures comply with the above standards, guaranteeing the highest levels of safety and regulatory adherence.

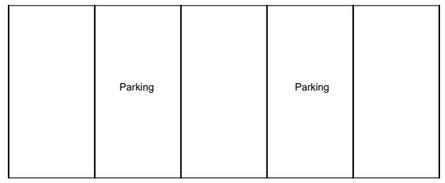
LEGENDS	
SYMBOLS	DESCRIPTION
	SMOKE DETECTOR
	SOUNDER
	MANUAL CALL POINT
	HEAT DETECTOR
FACP	FIRE ALARM CONTROL PANEL
EXIT	WHITE LED EXIT & EMERGENCY LIGHT
	FIRE EXTINGUISHERS

PROJECT : Renovation Houtlaan 2, 2243 CB Wassenaar, Netherlands	TITLE: Fire Safety Plan	SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY:	MD Al Amin
		REF.NO:	DRAWN BY:	.....
		REVISION NO:	CHECKED BY:	.....
	DRG NO: E3	PAGE: 03 DATE: 25/08/2024	ENGINEER	

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED



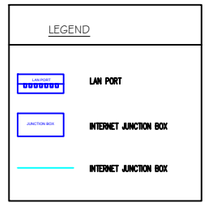
Ground Floor

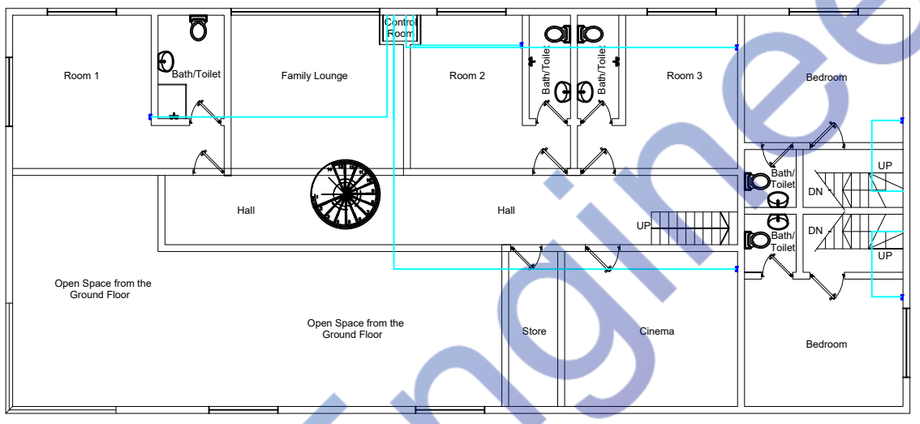


Note:
This Internet layout plan has been designed in strict accordance with all current and updated codes and regulations applicable in the Netherlands. The following codes and standards have been adhered to:

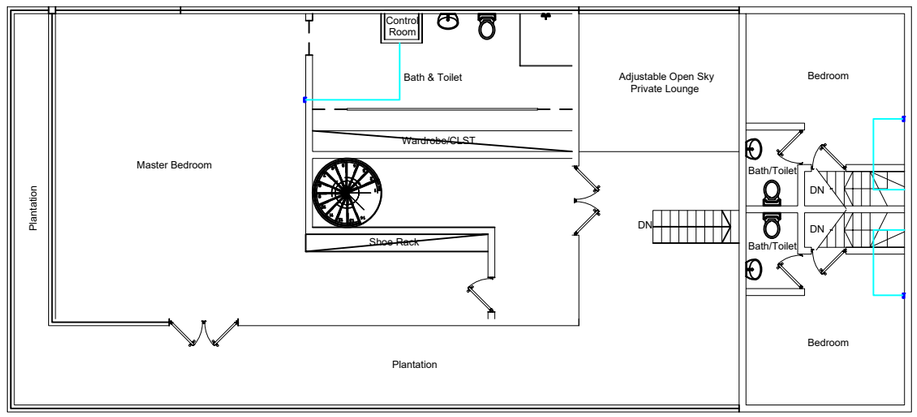
- NEN 1010:2015 - Governs the design and installation of electrical installations, including communication cabling.
- NEN-EN 50173 Series - Standards for the design and implementation of structured cabling systems.
- NEN-EN 50600 Series - Covers data center facilities and infrastructures, ensuring compliance with energy efficiency, availability, and security standards.
- NEN-EN-IEC 61935-1 - Specifies the testing requirements for structured cabling installations.
- NEN-EN-ISO/IEC 27001 - Ensures that all necessary information security controls are in place to protect the data transmitted over the network.
- Telecommunications Act (Telecommunicatiewet) - Governs the use of telecommunications infrastructure and services in the Netherlands.
- EU General Data Protection Regulation (GDPR) - Ensures compliance with data protection and privacy laws.

All designs and installations have been executed to meet the highest standards of safety, functionality, and compliance with the aforementioned regulations.





First Floor



Second Floor

PROJECT : Renovation Houtlaan 2, 2243 CB Wassenaar, Netherlands	TITLE: Low Voltage Plan	SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY:	MD Al Amin
		REF.NO:	DRAWN BY:	.....
		REVISION NO:	CHECKED BY:	.....
	DRG NO: E4	PAGE: 04 DATE: 25/08/2024	ENGINEER	

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED

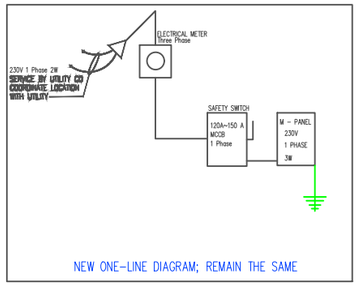
230/400 VOLT SINGLE PHASE 2 WIRE ELECTRICAL SERVICE				
ITEM	CONN. LOAD (VA)	DEMAND F.	DEMAND LOAD (WATTS)	TOTAL (AMPS)
LIGHTING	1000	125%	1250	
WATER HEATERS	2000	100%	2000	
KITCHEN EQUIPMENT	4200	65%	2730	
DINING EQUIPMENT	3000	65%	1950	
HVAC LOADS	7034	100%	7034	
SUB-TOTAL			14339	
LARGEST MOTOR	0	125%	0	
TOTAL @ 230/400 V	17234		14964	65

ELECTRICAL PANEL-MAIN

LOAD SERVED	CKT #	TYPE	BKR TRIP	WIRE SIZE	PHASE A	PHASE A	BKR TRIP	WIRE SIZE	TYPE	CKT #	LOAD SERVED
HVAC	1		35	#8	7034	1000	20	#14		2	LIGHTING LOAD
CLOTHES DRYER	3		20	#12	3000	2000	20	#12		4	WATER HEATER
COFFEE MAKER/TOASTER	5		20	#12	1200	500	20	#12		6	REFRIGERATOR
ELECTRIC KETTLE	7		20	#12	1500	1000	20	#12		8	OVEN
VACUUM CLEANER/IRON	9		20	#12	1500	1300	20	#12		10	DISHWASHER
SPARE	11		20	#12	0	400	20	#12		12	WASHING MACHINE
SPARE	13		20	#12	0	1000	20	#12		14	HAIR DRYER
TOTAL VA PHASE A					14234	7200					21434
TOTAL VOLT-AMPS											21434
DIVIDE TOTAL VOLT-AMPS BY SYSTEM VOLTAGE (PHASE TO PHASE)				230		AMPS					93
TOTAL CONNECTED LOAD (AMPS) @ 125%				116							
MAIN TYPE AND AMPERE RATING				120-150 AMP MCCB							
PANEL FEEDER SIZE - SEE RISER DIAGRAM											

1 E200 PANEL SCHEDULE & SERVICE CALCULATION

Material	
Name	Watt
CEILING FAN	55W
CEILING MOUNT ROUND LED LIGHT	20W
WALL MOUNT LED LIGHT	10W
CEILING MOUNT 2"X2" SQUARE LED LIGHT	40W
HANGING LIGHT	20W



SINGLE LINE DIAGRAM

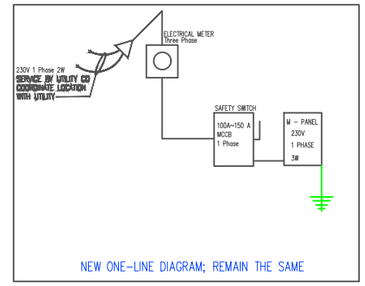
230/400 VOLT SINGLE PHASE 2 WIRE ELECTRICAL SERVICE (D1)				
ITEM	CONN. LOAD (VA)	DEMAND F.	DEMAND LOAD (WATTS)	TOTAL (AMPS)
LIGHTING	510	125%	637	
WATER HEATERS	2000	100%	2000	
KITCHEN EQUIPMENT	4200	65%	2730	
DINING EQUIPMENT	3000	65%	1950	
HVAC LOADS	1758.5	100%	1758.5	
SUB-TOTAL			14339	
LARGEST MOTOR	0	125%	0	
TOTAL @ 230/400 V	11469		23415	102

ELECTRICAL PANEL-MAIN (D1)

LOAD SERVED	CKT #	TYPE	BKR TRIP	WIRE SIZE	PHASE A	PHASE A	BKR TRIP	WIRE SIZE	TYPE	CKT #	LOAD SERVED
HVAC	1		20	#12	1758.5	510	20	#12		2	LIGHTING LOAD
CLOTHES DRYER	3		20	#12	3000	2000	20	#12		4	WATER HEATER
COFFEE MAKER/TOASTER	5		20	#12	1200	500	20	#12		6	REFRIGERATOR
ELECTRIC KETTLE	7		20	#12	1500	1000	20	#12		8	OVEN
VACUUM CLEANER/IRON	9		20	#12	1500	1300	20	#12		10	DISHWASHER
SPARE	11		20	#12	0	400	20	#12		12	WASHING MACHINE
SPARE	7		20	#12	0	1000	20	#12		8	HAIR DRYER
TOTAL VA PHASE A					8959	6700					15659
TOTAL VOLT-AMPS											15659
DIVIDE TOTAL VOLT-AMPS BY SYSTEM VOLTAGE (PHASE TO PHASE)				230		AMPS					68
TOTAL CONNECTED LOAD (AMPS) @ 125%				85							
MAIN TYPE AND AMPERE RATING				100-150 AMP MCCB							
PANEL FEEDER SIZE - SEE RISER DIAGRAM											

1 E200 PANEL SCHEDULE & SERVICE CALCULATION

Material (D1)	
Name	Watt
CEILING FAN	55W
CEILING MOUNT ROUND LED LIGHT	20W
WALL MOUNT LED LIGHT	10W
CEILING MOUNT 2"X2" SQUARE LED LIGHT	40W
HANGING LIGHT	20W



SINGLE LINE DIAGRAM (D1)

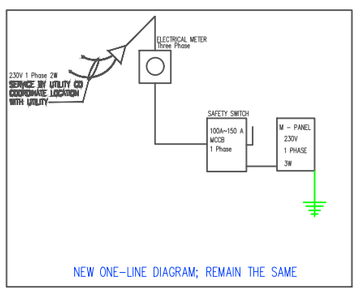
230/400 VOLT SINGLE PHASE 2 WIRE ELECTRICAL SERVICE (D2)				
ITEM	CONN. LOAD (VA)	DEMAND F.	DEMAND LOAD (WATTS)	TOTAL (AMPS)
LIGHTING	510	125%	637	
WATER HEATERS	2000	100%	2000	
KITCHEN EQUIPMENT	4200	65%	2730	
DINING EQUIPMENT	3000	65%	1950	
HVAC LOADS	1758.5	100%	1758.5	
SUB-TOTAL			14339	
LARGEST MOTOR	0	125%	0	
TOTAL @ 230/400 V	11469		23415	102

ELECTRICAL PANEL-MAIN (D2)

LOAD SERVED	CKT #	TYPE	BKR TRIP	WIRE SIZE	PHASE A	PHASE A	BKR TRIP	WIRE SIZE	TYPE	CKT #	LOAD SERVED
HVAC	1		20	#12	1758.5	510	20	#12		2	LIGHTING LOAD
CLOTHES DRYER	3		20	#12	3000	2000	20	#12		4	WATER HEATER
COFFEE MAKER/TOASTER	5		20	#12	1200	500	20	#12		6	REFRIGERATOR
ELECTRIC KETTLE	7		20	#12	1500	1000	20	#12		8	OVEN
VACUUM CLEANER/IRON	9		20	#12	1500	1300	20	#12		10	DISHWASHER
SPARE	11		20	#12	0	400	20	#12		12	WASHING MACHINE
SPARE	7		20	#12	0	1000	20	#12		8	HAIR DRYER
TOTAL VA PHASE A					8959	6700					15659
TOTAL VOLT-AMPS											15659
DIVIDE TOTAL VOLT-AMPS BY SYSTEM VOLTAGE (PHASE TO PHASE)				230		AMPS					68
TOTAL CONNECTED LOAD (AMPS) @ 125%				85							
MAIN TYPE AND AMPERE RATING				100-150 AMP MCCB							
PANEL FEEDER SIZE - SEE RISER DIAGRAM											

1 E200 PANEL SCHEDULE & SERVICE CALCULATION

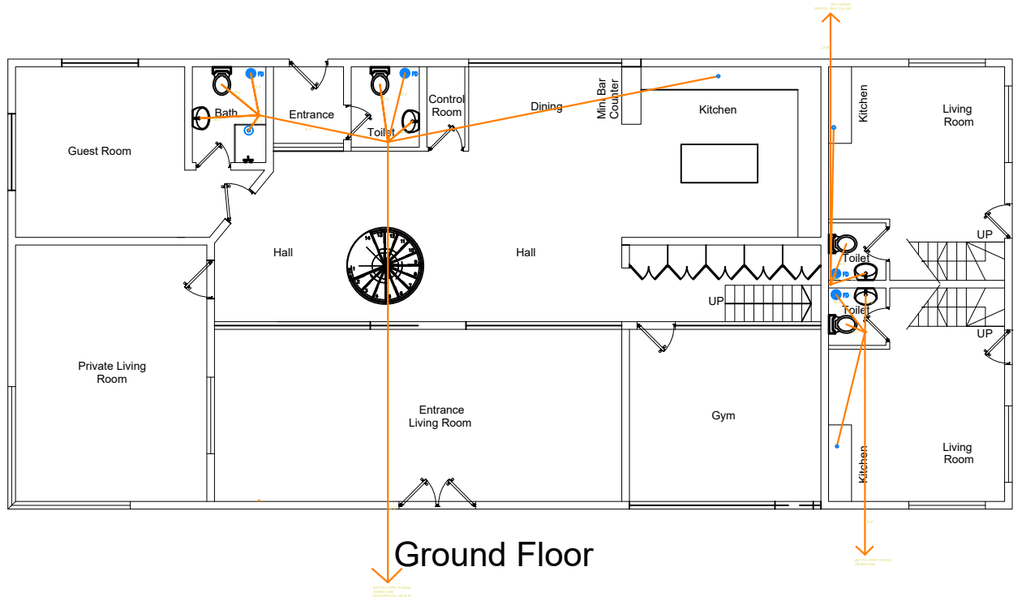
Material (D1)	
Name	Watt
CEILING FAN	55W
CEILING MOUNT ROUND LED LIGHT	20W
WALL MOUNT LED LIGHT	10W
CEILING MOUNT 2"X2" SQUARE LED LIGHT	40W
HANGING LIGHT	20W



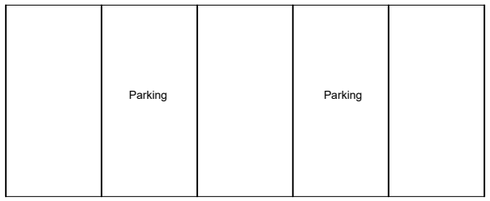
SINGLE LINE DIAGRAM (D2)

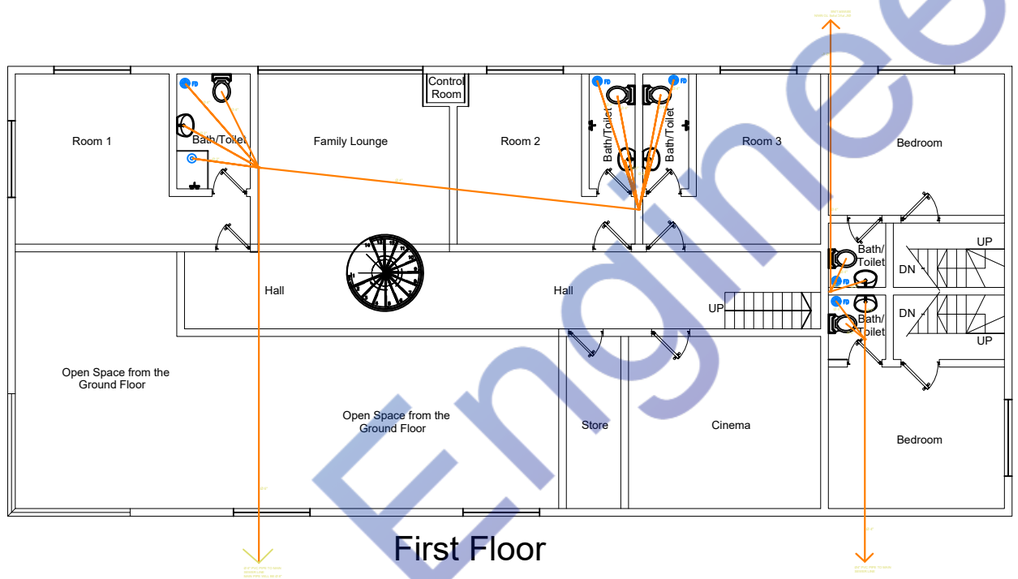
PROJECT : Renovation, Houtlaan 2, 2243 CB Wassenaar, Netherlands	TITLE: Electrical Load Schedule Plan	SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY: MD Al Amin		
		REF.NO:	DRAWN BY:		
		REVISION NO:	CHECKED BY:		
	DRG NO: E5	PAGE: 05	ENGINEER		
		DATE: 25/08/2024			

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED

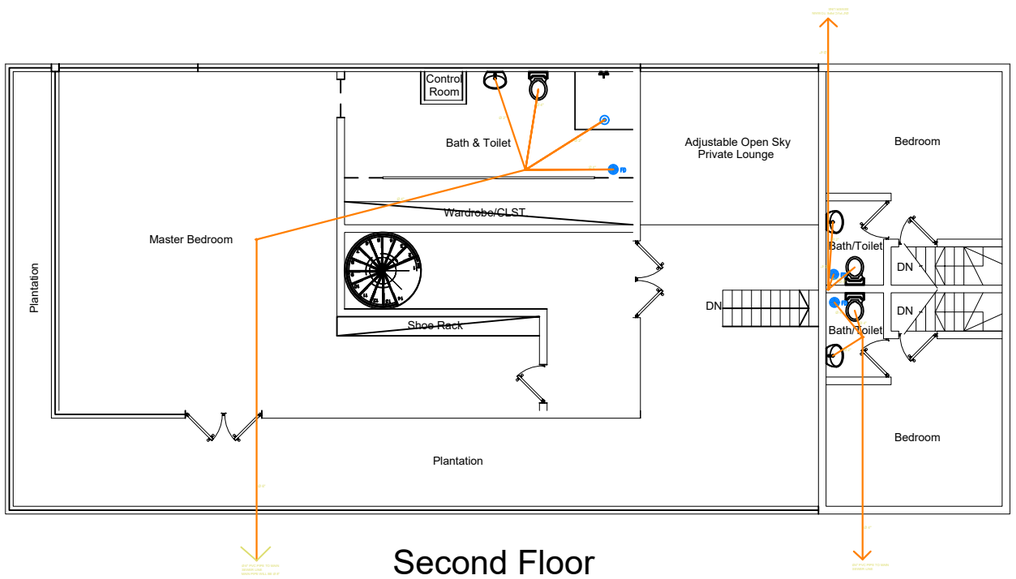


Ground Floor





First Floor



Second Floor

Note:
This sewerage layout plan has been carefully developed in strict adherence to all current and updated codes and regulations applicable in the Netherlands. The following codes and standards have been diligently followed:

- NEN 3215:2016 - Dutch standard for the design and construction of building drainage systems, ensuring proper wastewater management.
- NEN 7028:2017 - Governs the requirements for pressure drainage systems in residential areas.
- Bouwbesluit 2012 - Dutch Building Decree that sets requirements for the safety, health, usability, energy efficiency, and environmental quality of buildings, including sanitation and sewerage systems.
- RIONED Guidelines - Ensures best practices for urban drainage and sewerage design in the Netherlands.
- Waterwet (Water Act) - Provides regulations for the management and control of water resources, including wastewater and sewage systems.

The design has been executed in full compliance with these standards to ensure that the sewerage system is safe, efficient, and environmentally responsible.

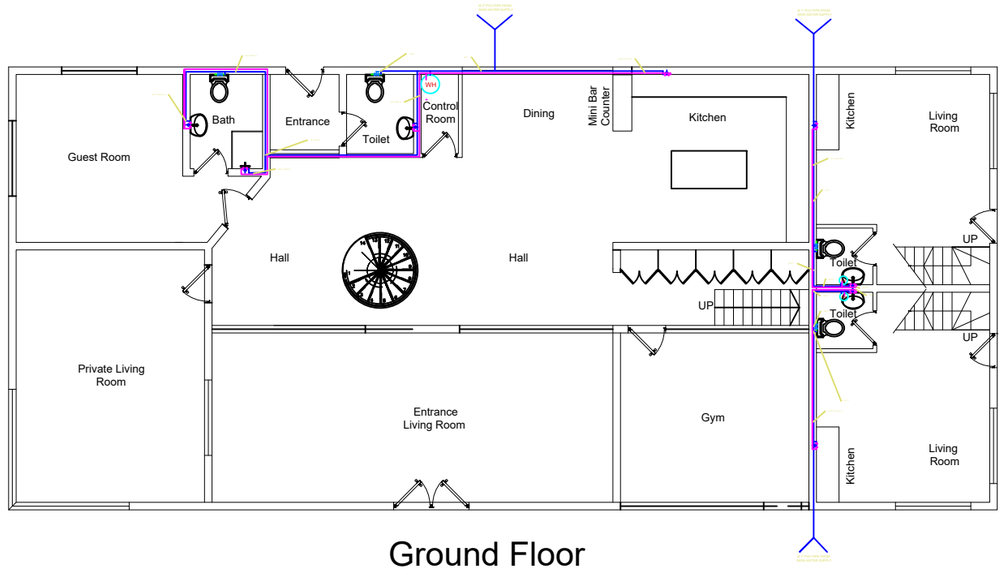
SEWERAGE LEGEND

WASTE WATER/ SEWER LINE (UPVC PIPE)

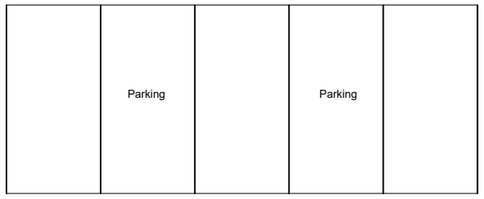
TOILET WASTE/ SEWER LINE (UPVC PIPE)

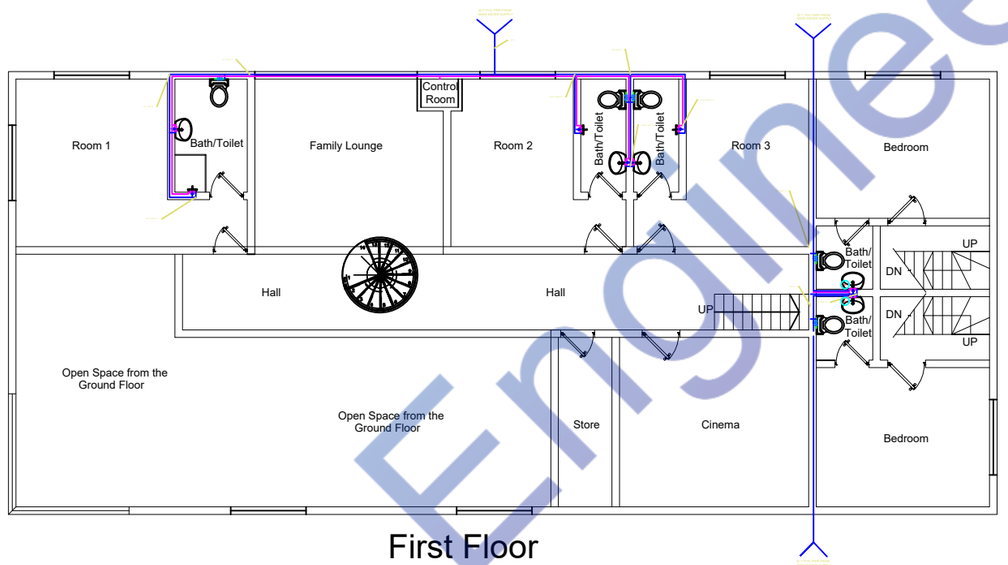
	PROJECT : Renovation Houtlaan 2, 2243 CB Wassenaar, Netherlands	TITLE: Plumbing Sewerage Plan	SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY:	MD Al Amin
			REF.NO:	DRAWN BY:	.....
			REVISION NO:	CHECKED BY:	.....
		DRG NO: P1	PAGE: 06 DATE: 25/08/2024	ENGINEER	

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED

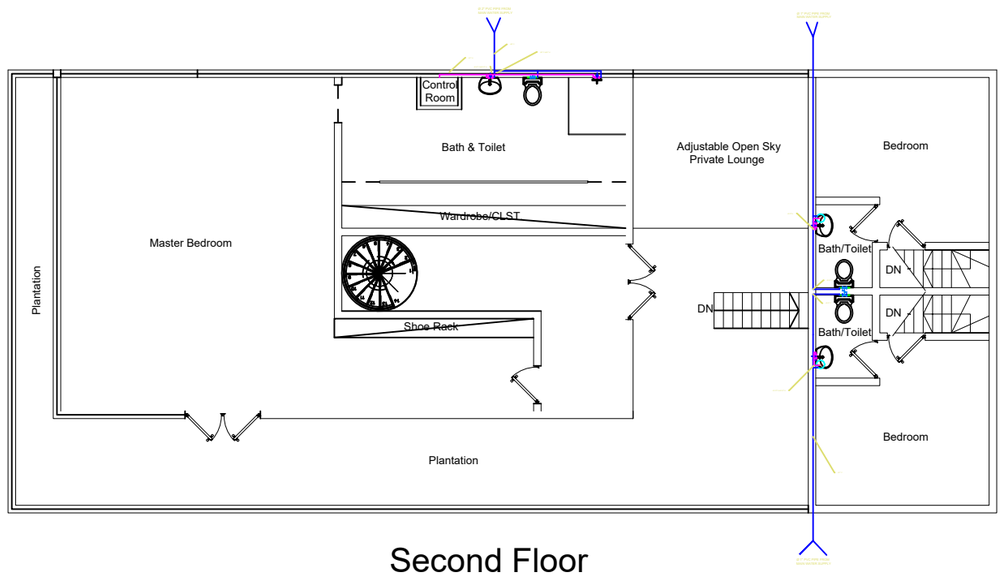


Ground Floor





First Floor



Second Floor

Note:
This plumbing layout plan has been carefully crafted in accordance with all current and updated codes and regulations applicable in the Netherlands. The following codes and standards have been strictly observed:

- NEN 1006: General Provisions for Drinking Water Installations - Ensures the safety, hygiene, and functionality of drinking water systems.
- NTR 3216: Water Supply Systems in Buildings - Governs the design, installation, and maintenance of water supply systems.
- NEN 3215: Drainage Systems within Buildings - Covers the requirements for the design and installation of drainage systems.
- NEN 1078: Gas Installations in Buildings - Ensures the safe installation and maintenance of gas supply systems.
- NEN 2768: Sanitary Installations - Provides guidelines for the installation of sanitary systems, including water supply and waste management.
- Building Decree (Bouwbesluit 2012) - Governs building regulations, including water, energy, and environmental standards relevant to plumbing systems.

All designs and installations have been executed in compliance with these standards, ensuring the safety, efficiency, and reliability of the plumbing system.

PLUMBING LEGEND	
	BALL VALVE (BV)
	GATE VALVE (GV)
	MIXING VALVE (MV)
	FLOOR CLEAN OUT (FCO)
FD	FLOOR DRAIN (FD)
	HUB DRAIN (HD)
FC	FLOOR SINK (FS)
	PIPE TURNING UP
G	PIPE TURNING DOWN
(E)	EXISTING PIPE
(N)	NEW PIPE

LINES TYPE LEGEND	
	COLD WATER LINE (CW)
	HOT WATER LINE (HW)
	SEWER LINE (S)
	GAS LINE (G)

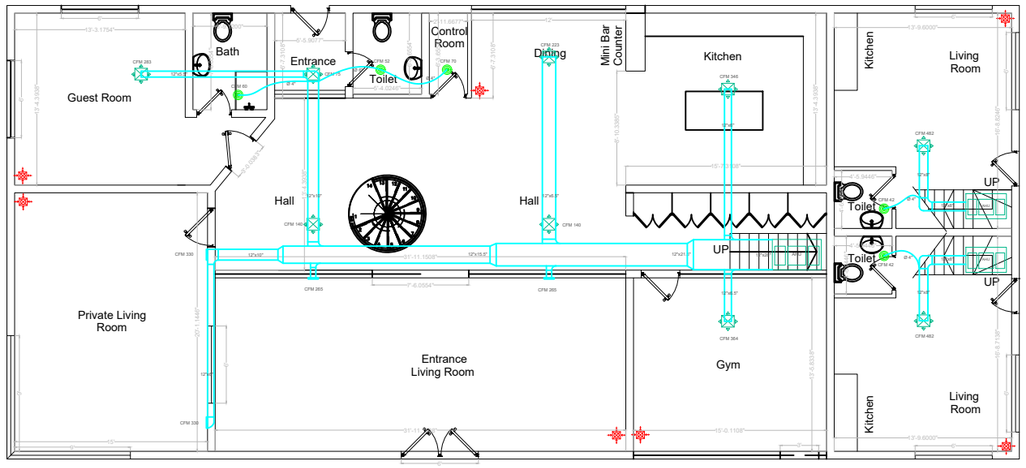
PROJECT :
Renovation
Houtlaan 2, 2243 CB Wassenaar, Netherlands

TITLE:
Plumbing Water Supply Plan

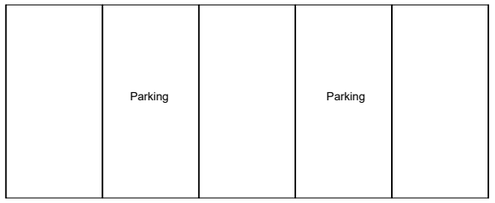
DRG NO: P2

SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY: MD Al Amin
REF.NO:	DRAWN BY: .....
REVISION NO:	CHECKED BY: .....
PAGE: 07	ENGINEER
DATE: 25/08/2024	

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED



Ground Floor



Note:
This HVAC layout plan has been meticulously designed to ensure optimal performance, energy efficiency, and compliance with the specific requirements for the project located in Wassenaar, Netherlands. The plan includes the design and sizing of three geothermal heating and cooling systems, each tailored to meet the unique demands of the designated zones.

System Overview:

System 1: Geothermal Heating & Cooling (Main System)
Air System Type: Ground Source Heat Pump (GSHP)
Number of Zones: 3
Floor Area: 4247.2 ft²
Total Cooling Coil Load: 2.0 Tons (23.5 MBH)
Sensible Cooling Load: 18.3 MBH
Maximum Coil CFM: 628 CFM
Heating Coil Load: 36.6 MBH

System 2: Geothermal Heating & Cooling (D1)
Air System Type: Ground Source Heat Pump (GSHP)
Number of Zones: 1
Floor Area: 610.3 ft²
Total Cooling Coil Load: 0.3 Tons (3.6 MBH)
Sensible Cooling Load: 2.8 MBH
Maximum Coil CFM: 96 CFM
Heating Coil Load: 5.6 MBH

System 3: Geothermal Heating & Cooling (D2)
Air System Type: Ground Source Heat Pump (GSHP)
Number of Zones: 1
Floor Area: 610.3 ft²
Total Cooling Coil Load: 0.3 Tons (3.6 MBH)
Sensible Cooling Load: 2.8 MBH
Maximum Coil CFM: 96 CFM
Heating Coil Load: 5.6 MBH

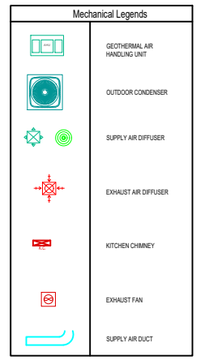
Design Considerations:
Cooling and Heating Loads: The cooling and heating coil loads have been calculated for all relevant months (January to December), ensuring year-round comfort and efficiency.
Airflow Rates: Airflow rates have been optimized for each zone, taking into consideration peak space loads and ensuring balanced air distribution.
Ventilation and Exhaust Fans: The ventilation and exhaust fans are sized to maintain appropriate indoor air quality, with detailed calculations for CFM per square foot and per person.

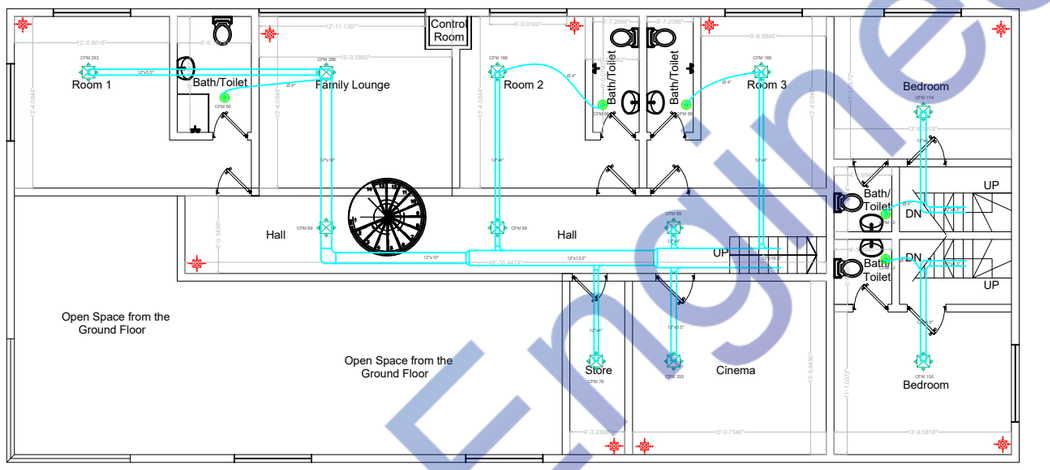
Compliance and Standards:
This design adheres to all relevant codes and standards for geothermal systems, ensuring compliance with both local regulations in the Netherlands and internationally recognized best practices for HVAC systems.

Note:
This HVAC layout plan, designed for a geothermal heating and cooling system, has been developed in strict adherence to the latest codes and regulations applicable in the Netherlands. The following codes and standards have been meticulously followed:

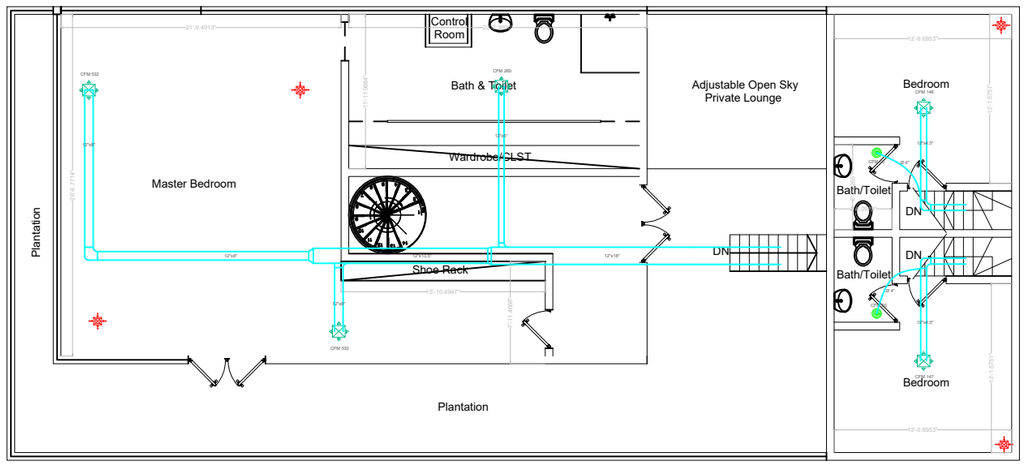
- NEN 7120:2011/A1:2016 - Dutch standard for energy performance of buildings, ensuring compliance with energy efficiency requirements.
- NEN 1078:2004 - Governs the installation and design of heating systems, including geothermal installations.
- NEN 1010:2015 - Ensures electrical installations, particularly in connection with geothermal systems, comply with safety standards.
- NEN-EN 12828:2012 - Regulates the design and installation of heating systems in buildings.
- Bouwbesluit 2012 - The Dutch Building Decree, providing comprehensive guidelines for building safety, health, and energy efficiency.
- BRL KBI 6000 - Certification scheme for the installation of geothermal heat pump systems, ensuring the quality and safety of geothermal HVAC systems.

This plan has been crafted with these updated standards in mind to ensure an efficient, safe, and compliant geothermal heating and cooling system.





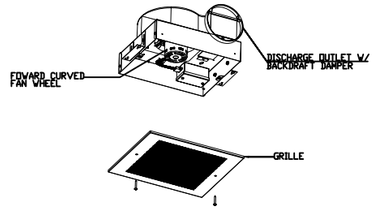
First Floor



Second Floor

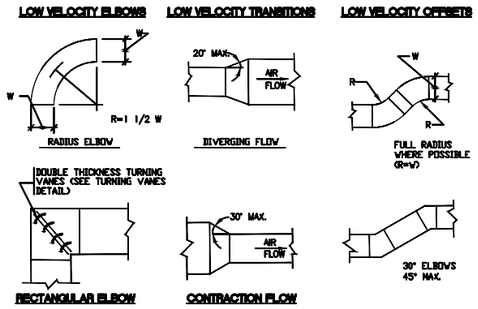
PROJECT : Renovation, Houtlaan 2, 2243 CB Wassenaar, Netherlands	TITLE: HVAC Plan	SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY: MD Al Amin
		REF.NO:	DRAWN BY: .....
		REVISION NO:	CHECKED BY: .....
	DRG NO: H1	PAGE: 08	ENGINEER
		DATE: 25/08/2024	

REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED

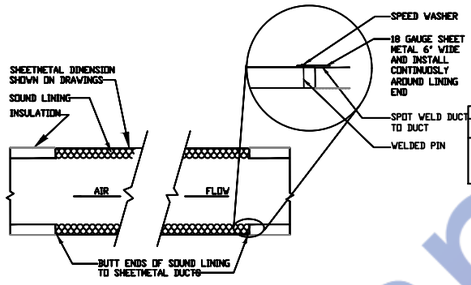


CEILING FAN DETAIL
NOT TO SCALE

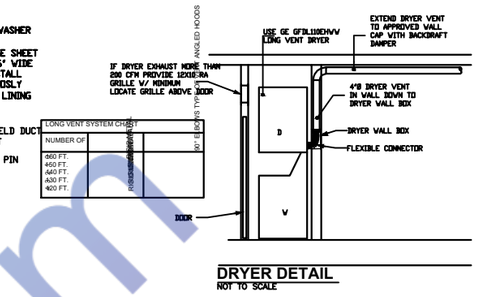
CEILING RADIATION DAMPERS SHALL BE INSTALLED IN ACCORDANCE WITH UL 555C



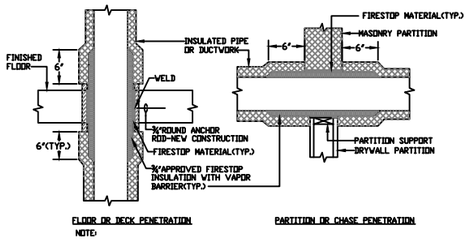
LOW VELOCITY TRANSITIONS, OFFSETS AND ELBOWS
NOT TO SCALE



TYPICAL SOUND LINING DETAIL
NOT TO SCALE



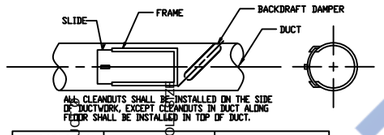
DRYER DETAIL
NOT TO SCALE



NOTE:

APPLICABLE TO PENETRATIONS OF ALL FIRE RATED MEMBRANES, IN ACCORDANCE WITH 2012 IBC 714. REFER UL LISTED FIRE STOPPING SYSTEMS UL-1479, UL-2043

PENETRATION OF FIRE/SMOKE BARRIERS
NOT TO SCALE



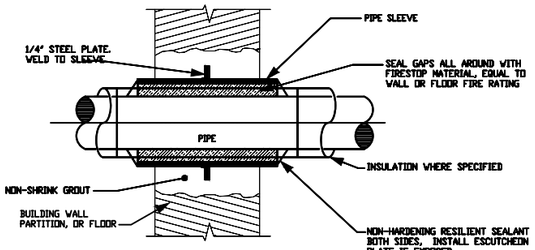
SLIDE SIZE	HOLE SIZE	
4" - 5"	3" X 6"	4" X 8"
6"	4" X 6"	6" X 8"

CLEAN OUT / INSPECTION DETAIL
NO SCALE

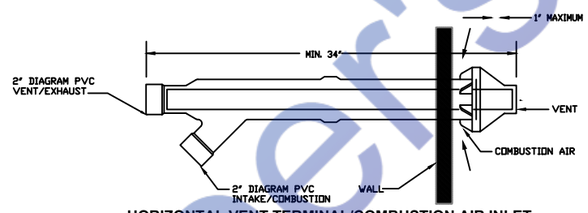
RESIDENTIAL GRILLES & REGISTERS SCHEDULE

DESIG ◯	TYPE (REFER TO DETAILS)	SERVICE	AIR FLOW RANGE (CFM)	NOMINAL SIZE/ DESCRIPTION (INCH)	INLET/ NECK SIZE (IN)	BASIS OF DESIGN/REMARKS
A	REGISTER	SA	0-50	6x4	4"ø	300RL, BORDER TYPE A
B	REGISTER	SA	51-100	6x6 OR 10X4	5"ø	300RL, BORDER TYPE A
C	REGISTER	SA	101-150	10x6	7"ø	300RL, BORDER TYPE A
D	REGISTER	SA	151-200	12x6	8"ø	300RL, BORDER TYPE A
E	REGISTER	SA	201-250	14x6	9"ø	300RL, BORDER TYPE A
F	RG	RA/EA	0-100	6x6	6x6	350RL, BORDER TYPE A
G	RG	RA/EA	101-200	8x8	8x8	350RL, BORDER TYPE A
H	RG	RA/EA	201-300	10x10	10x10	350RL, BORDER TYPE A
I	RG	RA/EA	301-450	12x12	12x12	350RL, BORDER TYPE A
J	RG	RA/EA	451-600	14x14	14x14	350RL, BORDER TYPE A
K	RG	RA/EA	601-800	16x16	16x16	350RL, BORDER TYPE A
L	RG	RA/EA	801-1100	18x18	18x18	350RL, BORDER TYPE A
M	RG	RA/EA	1101-1300	20x20	20x20	350RL, BORDER TYPE A
N	RG	RA/EA	1301-1600	22x22	22x22	350RL, BORDER TYPE A

NOTES:
1. REFER TO ARCHITECT DRAWINGS FOR TYPE OF CEILING.
2. MODEL NUMBERS IN "BASIS OF DESIGN" ARE TITUS
3. PROVIDE HEAVY DUTY FRAME AND CORE WHERE MOUNTED IN FLOORS.
4. PROVIDE WITH FIRE DAMPER FOR UL LISTED CEILING
5. PROVIDE ROUND TO SQUARE ADAPTOR BOOT

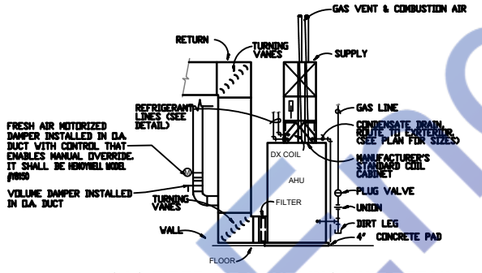


INTERIOR MASONRY WALL AND FLOOR PENETRATION
NOT TO SCALE

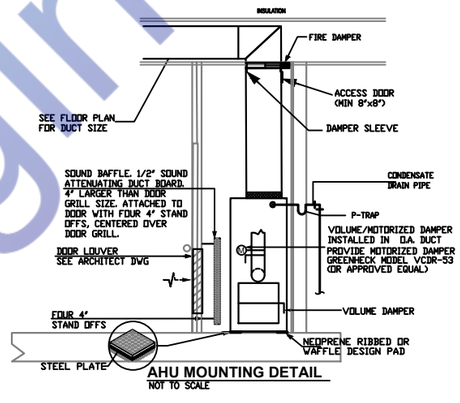


HORIZONTAL VENT TERMINAL/COMBUSTION AIR INLET
NOT TO SCALE

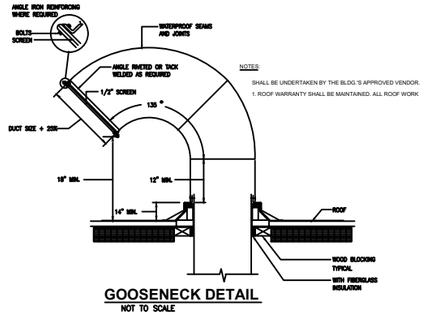
NOTE-PLASTIC PIPE AND FITTINGS USED TO VENT APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH THE APPLIANCE MANUFACTURER'S INSTRUCTIONS. PLASTIC PIPE VENTING MATERIALS LISTED AND LABELED IN ACCORDANCE WITH UL 1738 SHALL BE INSTALLED IN ACCORDANCE WITH THE VENT MANUFACTURER'S INSTALLATION INSTRUCTIONS. FLUID PVC PIPING SHALL NOT BE USED FOR COMBUSTION GAS VENTING.



GAS-FIRED AIR HANDLING UNIT DETAIL
N.T.S.



AHU MOUNTING DETAIL
NOT TO SCALE



NOTES

SHALL BE UNDERTAKEN BY THE BLDG.'S APPROVED VENDOR.

1. ROOF WARRANTY SHALL BE MAINTAINED. ALL ROOF WORK

GOOSENECK DETAIL
NOT TO SCALE

	PROJECT : Renovation, Houtlaan 2, 2243 CB Wassenaar, Netherlands	TITLE: HVAC Plan	SCALE: 1 8" = 1' 0" @ A1	DESIGNED BY: MD Al Amin	
			REF.NO:	DRAWN BY:	
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REV	DESCRIPTION	DATE	BY	CHECKED	APPROVED